

Appl. No. 10/605,833
Amtd. dated July 06, 2006
Reply to Office action of April 06, 2006

Listing of the Claims:

No amendments have been made to the claims, and this listing of the claims is provided for reference only:

- 5 1 (previously presented): A nitride light-emitting device having an adhesive reflecting layer comprising:
 - a metal reflecting layer having an upper surface and a lower surface;
 - a first reaction layer formed over the upper surface of the metal reflecting layer;
 - a transparent adhesive layer formed over the first reaction layer;
- 10 10 a second reaction layer formed over the transparent adhesive layer;
 - a nitride light-emitting stack layer formed over the second reaction layer, the nitride light-emitting stack layer comprising a first surface and a second surface;
 - a first electrode formed over the first surface; and
- 15 15 a second electrode formed over the second surface;
 - wherein each of the first and second reaction layers is formed to enhance an adhesion provided by the transparent adhesive layer.
- 20 2 (original): The nitride light-emitting device of claim 1 wherein the nitride light-emitting stack layer comprises a nitride first contact layer, the nitride first contact layer comprising a first surface and a second surface; a nitride first cladding layer formed over the first surface; a nitride light-emitting layer formed over the nitride first cladding layer; a nitride second cladding layer formed over the nitride light-emitting layer; and a nitride second contact layer formed over the nitride second cladding layer.
- 25 25 3 (original): The nitride light-emitting device of claim 2 wherein the first electrode is formed over the second surface and the second electrode is formed over the nitride

Appl. No. 10/605,833
Amdt dated July 06, 2006
Reply to Office action of April 06, 2006

second contact layer.

4 (original): The nitride light-emitting device of claim 1 further comprising a first substrate formed over the lower surface of the metal reflecting layer.

5

5 (original): The nitride light-emitting device of claim 4 further comprising a metal heat sink formed over a lower surface of the first substrate.

6 (original): The nitride light-emitting device of claim 1 further comprising a metal heat 10 sink formed over a lower surface of the metal reflecting layer.

7 (original): The nitride light-emitting device of claim 1 further comprising a second substrate formed between the second reaction layer and the light-emitting stack layer.

15

8 (original): The nitride light-emitting device of claim 1 further comprising a transparent conductive layer formed between the second reaction layer and the light-emitting stack layer.

20 9 (previously presented): The nitride light-emitting device of claim 8 wherein the transparent conductive layer comprises a first surface and a second surface; the first electrode is formed over the first surface; the light-emitting stack layer is formed over the second surface; and the second electrode is formed over the light-emitting stack layer.

25

10 (previously presented): The nitride light-emitting device of claim 1 wherein the metal reflecting layer comprises at least one material selected from a material group consisting of In, Sn, Al, Au, Pt, Zn, Ag, Pb, Pd, Ge, Cu, AuBe, AuGe, Ni, PbSn,

Appl. No. 10/605,833
Amtd. dated July 06, 2006
Reply to Office action of April 06, 2006

and AuZn.

11 (previously presented): The nitride light-emitting device of claim 1 wherein the first reaction layer comprises at least one material selected from a material group consisting of SiNx, Ti, and Cr.

5

12 (previously presented): The nitride light-emitting device of claim 1 wherein the transparent adhesive layer comprises at least one material selected from a material group consisting of PI, BCB, and PFBC.

10

13 (previously presented): The nitride light-emitting device of claim 1 wherein the second reaction layer comprises at least one material selected from a material group consisting of SiNx, Ti, and Cr.

15 14 (previously presented): The nitride light-emitting device of claim 2 wherein the nitride first contact layer comprises at least one material selected from a material group consisting of GaN, InGaN, and AlGaN.

20

15 (previously presented): The nitride light-emitting device of claim 2 wherein the nitride first cladding layer comprises at least one material selected from a material group consisting of AlN, GaN, AlGaN, InGaN, and AlInGaN.

25

16 (previously presented): The nitride light-emitting device of claim 2 wherein the nitride light-emitting layer comprises at least one material selected from a material group consisting of GaN, InGaN, and AlInGaN.

17 (previously presented): The nitride light-emitting device of claim 2 wherein the nitride second cladding layer comprises at least one material selected from a material group

Appl. No. 10/605,833
Amdt. dated July 06, 2006
Reply to Office action of April 06, 2006

consisting of Al_xGa_{1-x}N, GaN, AlGaN, InGaN, and AlInGaN.

18 (previously presented): The nitride light-emitting device of claim 2 wherein the nitride second contact layer comprises at least one material selected from a material group consisting of GaN, InGaN, and AlGaN.

5

19 (previously presented): The nitride light-emitting device of claim 4 wherein the first substrate comprises at least one material selected from a material group consisting of silicon, GaAs, glass, quartz, GaP, GaAsP, AlGaAs, and metal.

10

20 (previously presented): The nitride light-emitting device of claim 6 wherein the metal heat sink comprises at least one material selected from a material group consisting of Sn, Al, Au, Pt, Zn, Ag, Pb, Pd, Ge, Cu, AuBe, AuGe, Ni, PbSn, and AuZn.

15 21 (previously presented): The nitride light-emitting device of claim 7 wherein the second substrate comprises at least one material selected from a material group consisting of Al₂O₃, SiC, ZnO, and GaN.

22 (original): The nitride light-emitting device of claim 8 wherein the transparent conductive layer comprises at least one material selected from a material group consisting of indium tin oxide, cadmium tin oxide, antimony tin oxide, zinc oxide, and zinc tin oxide.

20

23 (previously presented): The nitride light-emitting device of claim 13 wherein the transparent adhesive layer comprises at least one material selected from a material group consisting of PI, BCB, and PFCB.

25

24 (previously presented): The nitride light-emitting device of claim 12 wherein the first

Appl. No. 10/605,833
Amtd. dated July 06, 2006
Reply to Office action of April 06, 2006

reaction layer comprises SiNx or Cr.

25 (previously presented): The nitride light-emitting device of claim 11 wherein the transparent adhesive layer comprises PFCB.

5

6